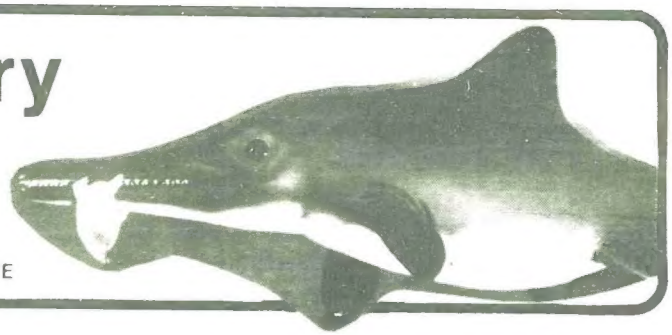
Natural History Gallery

MUSEUM EDUCATION SERVICE



This gallery, on the second floor of the Museum, is divided into displays showing different regions of the earth, and their wildlife. Other sections describe **Man and Environment** and **Earth Before Man.**

The **Plant Room** contains changing displays of living material. Recently Medicinal Herbs and Plant Nutrition have featured.

A separate Plant Room leaflet is available from the Museum Education Service (see back page).

The numbers in brackets in this guide indicate the maximum number of children who are able to use the entire display in comfort.

ARCTIC (20)

Close to the **North Pole** it is so cold that the Arctic Ocean is frozen. There are no plants and only a few animals. These feed on other animals living in the sea beneath the ice. The Polar Bear eats Seals, fish and any other animals it can catch.

Surrounding the Arctic Ocean are the land masses of North America, Europe and Asia. These are warm enough to allow some plant growth. In these **tundra** regions Reindeer feed on the sparce vegetation. Arctic Hares, with their small ears to help to reduce heat loss, survive. White Arctic Foxes, camouflaged against the snow, hunt here. Many animals, including the Snowy Owl, have a thick layer of feathers or fur to keep them warm.

Some birds, such as the Pink-footed Goose, migrate to warmer areas in the winter.

Eskimos and Lapps use stone, bone and skins to combat the harsh conditions.

CONIFEROUS FOREST (20)

This type of forest is found in areas which have long cold winters and short summers. Evergreen trees such as pines are very common. Animals living amongst the trees include Lynx, Wolf, Brown Bear, Roe Deer, Osprey, Chiffchaff and Capercaillie.

In winter the ground is frozen and covered with snow. The air is often still and bitterly cold. To survive the Siberian Chipmunk hibernates in an underground burrow. Its heart-beat and breathing rate drop and the body temperature falls almost to that of the surrounding air. Occasionally it wakes to eat some of the nuts and seeds stored in the burrow.

Crossbills feed on the seeds of pine cones. When these are in short supply in Siberia flocks of Crossbills move to other areas including Britain. These irregular migrations are known as **irruptions.**

Coniferous forests are now widely planted in Britain by the Forestry Commission for timber production.

Flowers and cones of Corsican Pine *(Muriel Sibley)*

TROPICAL RAIN FOREST

FOREST FLOOR (DOWNSTAIRS) (10)

Tropical Rain Forest (jungle) is formed in areas where it is warm and wet. There are no distinct seasons and plants grow continually. The Forest can be divided into various layers.

In South America the Forest Floor is occupied by Indians and mammals such as the Capybara. Wrens, Honeycreepers and Chachalacas can be found and a great variety of insects survive. Insects are eaten by Anteaters and Armadillos. The Armadillo is the only mammal to have a shell.

FOREST CANOPY (UPSTAIRS) (15)

The trees compete for light in the jungle and so a dense layer of leaves is formed up to 40 metres (100 feet) above the ground. Many beautifully coloured animals live here. The Toucan, with its large bill for feeding on fruit, and the superb bright-green Quetzel are typical. Smaller birds are hunted by a large range of birds of prey, the Harpy Eagle showing the crushing feet and tearing beak very well. Monkeys are even scared of this monster.

Bats, the only true flying mammals, have evolved many ways to use the forest. Some feed on nectar, others eat fruit, some are hunters, and a few drink blood.

Unfortunately, the world's jungles are being cut down at a rate of 1% per year. This is a matter of great concern to many ecologists.

SAVANNAH (20)

Savannah is open tropical grass land. Animals living there find it very difficult to hide. The best means of defence on the open plains is fast movement. Herds of Zebras, Wildebeest (Gnus) and Impalas graze the tough vegetation. Keen vision gives early warning of animals which hunt on the plains, such as Hyaenas and Leopards.

The Sacred Ibis was thought by the Egyptians to be the incarnation of Thoth, god of wisdom and learning. It is now extinct in Egypt but survives in mud flats south of the Sahara.

Insects are eaten by birds such as the Blue-eared Glossy Starling which is hunted by the fast-flying Lanner Falcon.

DESERT (15)

Water shortage is a great problem in the North American deserts. Many desert plants store water in fleshy leaves and stems. Cacti also have spines which discourage browsing animals.

Many animals avoid day-time sun, being active at night (e.g. Coyotes and Pumas). Ground Squirrels spend the hottest, driest months asleep under ground.

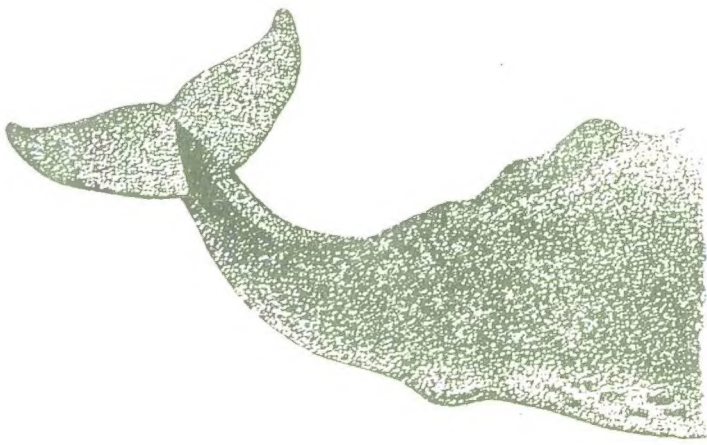
Birds such as the Red Tailed Hawk fly to great heights where the air is cool. Some birds migrate to cooler areas in summer, and others fly long distances in search of water.

EVOLUTION (20)

Evolution involves change. A species is a group of animals or plants which can breed together to produce fertile offspring. Over long periods of time a species may slowly change into a new species, or even into two or more new species.

This means that many plants and animals that once were alive are now extinct. We know of these species only by fossil remains.

Darwin suggested that species change because individuals compete with each other for food and other resources. In this competition some individuals have characteristics which make them more likely to survive and reproduce than others. These characteristics are passed on to their offspring. Hence, in each generation the number of individuals that possess these valuable characters increases slightly. This process is called natural selection.



LIFE IN THE OCEANS

DOWNSTAIRS (20)

Oceans cover more than 70% of the Earth's surface. The seas are important to man because he can use the animals found there for food. Fishing methods are continually improving. Primitive whaling was a dangerous occupation but the explosive harpoon has changed that.

In some cases, such as Atlantic Salmon, we are even able to artificially rear the animals and use them to restock rivers.

UPSTAIRS (15)

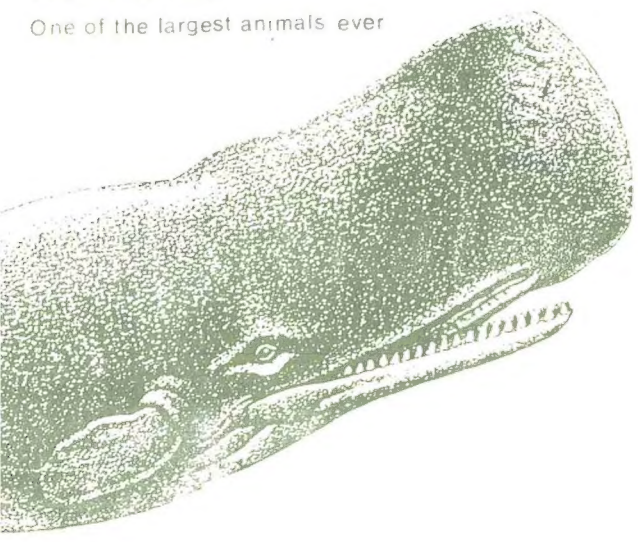
At first sight sandy and muddy shores seem to be lacking all forms of life. Many animals live here but most burrow down to avoid drying out.

On rocky shores they are unable to do this. Animals and plants here are zoned depending upon the amount of exposure to the air which they can withstand.

Animal life in shallow water is very different from that in the cold, dark depths. In deep water some fish even have to provide their own lights to attract prey.

SPERM WHALE

One of the largest animals ever



EARTH BEFORE MAN (30)

The Earth was probably formed about 4,500 million years ago. For a very long time there was no life at all on Earth. The first animals to appear did not have backbones (invertebrates). It was not until 500 million years ago that the first vertebrate (animals with backbones) evolved. These were fish.

Later amphibians thrived in the Coal Forest. The 'Age of Reptiles' began 225 million years ago, and included the rise of the dinosaurs. Much later these were followed by birds and mammals. Some very large mammals, such as Mammoths, appeared and many were hunted by primitive modern man.

MAN AND ENVIRONMENT (40)

Modern industries use resources such as oil, coal and minerals. These cannot be replaced and alternatives will have to be found.

Some materials can be renewed (e.g. wood) and others reused (e.g. metals). Sensible management of all resources is essential if we are to maintain our standards of living.

Since the Industrial Revolution man has spoiled his surroundings in many ways. Land can be reclaimed, water pollution prevented and the air cleaned, but the will to do this is essential.

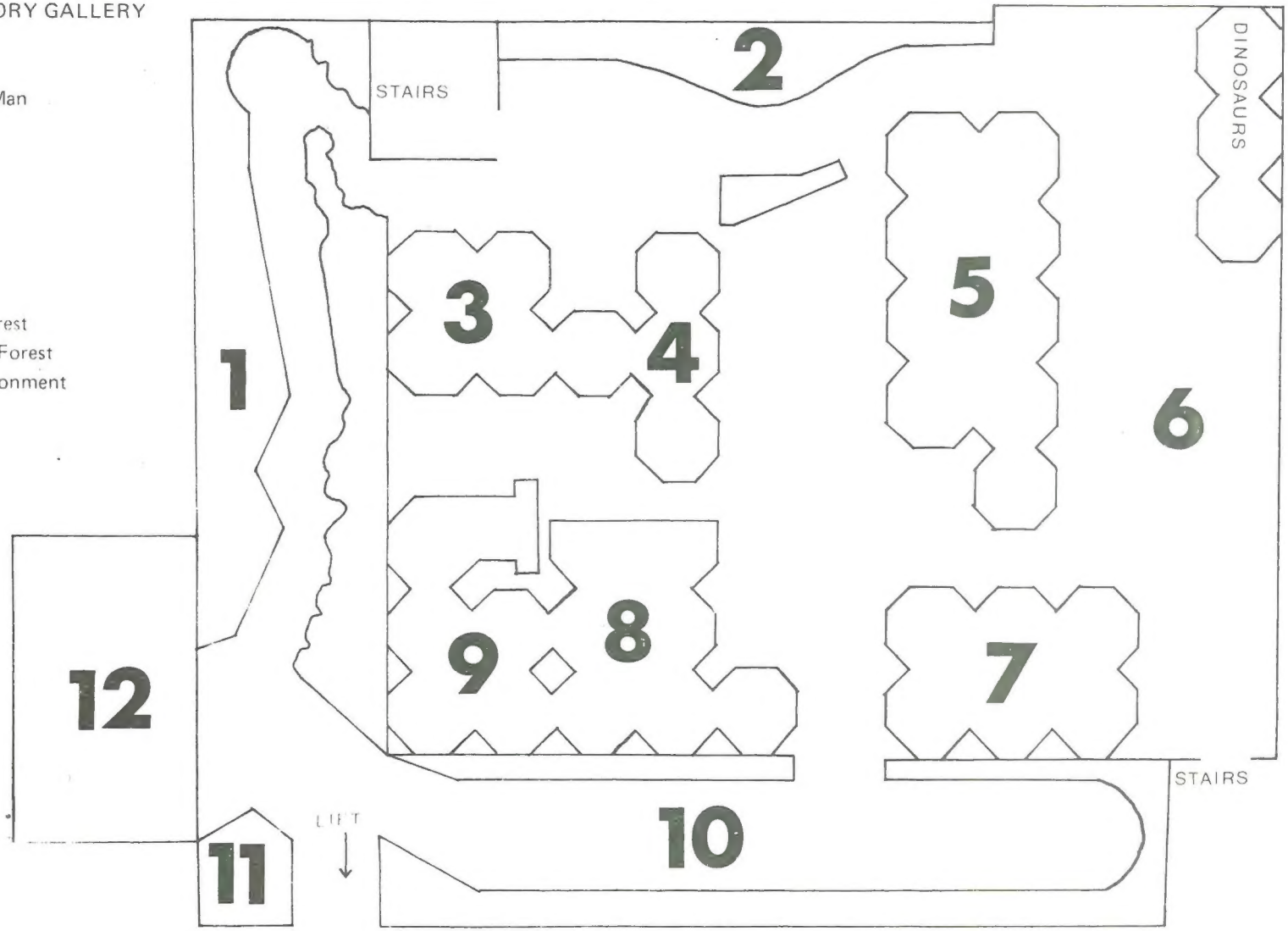
OTHER EXHIBITS

Dinosaur skeletons (Allosaurus and Camptosaurus) (10)

Giant Deer Skeleton (5)

NATURAL HISTORY GALLERY

1. Earth Before Man
2. Evolution
3. Savannah
4. Deserts
5. Oceans
6. Temporary Exhibitions
7. Arctic
8. Coniferous Forest
9. Tropical Rain Forest
10. Man and Environment
11. Giant Deer
12. Plant Room



Museum Education Service

A wide range of sessions are offered to school and college groups. All enquiries to:

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